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06/848,017	04/03/1986	GILBERT P. HYATT	307	7574

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EXAMINER

BRAGDON, REGINALD GLENWOOD

ART UNIT PAPER NUMBER

2188

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

06/848,017

Applicant(s)

HYATT, GILBERT P.

Examiner

Reginald G. Bragdon

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 Jan 02, 28 March 02, and 28 Apr 03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5 and 41-351 is/are pending in the application.
- 4a) Of the above claim(s) 45-46, 48-49, 57-58, 61, 63, 70, 89-90, 92, 94-115, 117, 119, and 121-351 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5, 41-44, 47, 50-56, 59, 60, 62, 64-69, 71-88, 91, 93, 116, 118 and 120 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 April 1986 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 5 and 41-351 are pending in the application.

***Election/Restrictions***

2. Newly submitted (or amended) claims 45-46, 48-49, 57-58, 61, 63, 70, 89-90, 92, 94-115, 117, 119, and 121-351 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

For purposes of this restriction by original presentation requirement, claims are grouped as follows.

Group I. Claims 5, 41, 44, 47, 50-56, 59-60, 62, 64-69, 71-88, 91, 93, 116, and 118 drawn to a method and apparatus for generating filter processed information, classified in class 708, subclass 300.

Group II. Claims 45-46, 48-49, 57-58, 61, 63, 70, 89-90, 92, 94-97, 100-102, 105, 107-108, 110, 112, 114, and 220, drawn to a process for generating specific types of information using a digital signal processor, classified in class 712, subclass 36.

Group III. Claims 122, 124, 132, 140, 142, 144, 146, 148, 156-159, 166, 168, 184, and 202, drawn to a process generating information using specific instructions, classified in class 712, subclass 220.

Group IV. Claims 171-177, drawn to a single integrated circuit digital signal processor, classified in class 712, subclass 1.

Group V. Claims 160-165, 167, 169-170, and 326-347, drawn to a digital signal processor receiving feedback information from a machine, classified in class 700, subclass 28.

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Group VI. Claims 98-99, 103-104, 106, 133-138, 178-183, 185-199, 314-319, and 350-351, drawn to processing using a looping process, classified in class 712, subclass 241.

Group VII. Claims 109, 200-201, and 203-206, drawn to interrupt processing, classified in class 710, subclass 260.

Group VIII. Claims 111 and 214-219, drawn to a digital signal processor with a direct transfer circuit, classified in class 712, subclass 1.

Group IX. Claims 131 and 207-213, drawn to a digital signal processor with an indexing circuit, classified in class 712, subclass 1.

Group X. Claims 139 and 221-227, drawn to drawn to a digital signal processor with an indirect transfer circuit classified in class 712, subclass 1.

3. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as use in system that only performs processing of filter information. See MPEP § 806.05(d).

Inventions I and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as use in system that only performs processing of filter information. See MPEP § 806.05(d).

Inventions I and IV are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention IV has separate utility such as use in system that performs processing of seismic information for output to a plotter. See MPEP § 806.05(d).

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Inventions I and V are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as use in system that only performs processing of filter information. See MPEP § 806.05(d).

Inventions I and VI are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as use in system that only performs processing of filter information. See MPEP § 806.05(d).

Inventions I and VII are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as use in system that only performs processing of filter information. See MPEP § 806.05(d).

Inventions I and VIII are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as use in system that only performs processing of filter information. See MPEP § 806.05(d).

Inventions I and IX are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as use in system that only performs processing of filter information. See MPEP § 806.05(d).

Inventions I and X are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be

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separately usable. In the instant case, invention I has separate utility such as use in system that only performs processing of filter information. See MPEP § 806.05(d).

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and divergent search, restriction for examination purposes as indicated is proper.

5. Claims 42-43 link(s) inventions I and II. Claim 120 links inventions I and III. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim(s), claims 42-43 and 120. Claims 42-43 and 120 have been examined.

Upon the allowance of the linking claim(s), the restriction requirement as to the linked inventions shall be withdrawn and any claim(s) depending from or otherwise including all the limitations of the allowable linking claim(s) will be entitled to examination in the instant application. Applicant(s) are advised that if any such claim(s) depending from or including all the limitations of the allowable linking claim(s) is/are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

6. It is noted that within groups II and III there are numerous species. However, since groups II and III as a whole are withdrawn from consideration as not being directed to the originally presented invention, it is not necessary to establish a restriction of the species within these groups at this time.

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7. Claims 113, 115, 117, 119, 121, 123, 125-130, 141, 143, 145, 147, 149-155, 228-313, 320-325, and 348-349 link the inventions of Groups VI, VII, VIII, IX, and X. However, since groups VI, VII, VIII, IX, and X are withdrawn from consideration as not being directed to the originally presented invention, their linking claims (as set forth above) are also withdrawn from consideration as not being directed to the originally presented invention.

8. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 45-46, 48-49, 57-58, 61, 63, 70, 89-90, 92, 94-115, 117, 119, and 121-351 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

#### ***Information Disclosure Statement***

9. The information disclosure statements filed 08 February 2002 (paper no. 28), 30 July 2002 (paper no. 31), 04 October 2002 (paper no. 32), 05 May 2002 (paper no. 33), 16 January 2003 (paper no. 35), and 25 September 2003 (paper no. 36) fail to comply with 37 CFR 1.97(c) because they lack a statement as specified in 37 CFR 1.97(e) and/or because they lack the fee set forth in 37 CFR 1.17(p). They have been placed in the application file, but the information referred to therein has not been considered.

#### ***Priority***

10. Applicant has claimed priority under 35 U.S.C. 120 for the present invention through a line of patent applications. The most recent version of the claim to priority is set forth in the

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preliminary amendment received 30 July 1990 (paper no. 6). In paper no. 6, Applicant sets forth that the present application (06/848,017) is a continuation-in-part (CIP) of 06/425,731 (page 37 of paper no. 6, in the first paragraph under "Cross Reference to Related Applications"), a CIP of 06/342,611 (page 40, section "30"), and a CIP of 06/342,579 (page 40, section "31"). Applicant further sets forth that 06/425,731 is a CIP of 06/160,872 (page 37, section "A") and 08/860,257 (page 37, section "B").

Applicant sets forth, on page 37, that 06/160,872 is a CIP of various applications as set forth in sections "1"- "29". However, priority is denied to the following applications because 06/160,872 was filed after the patenting or abandonment of the particular applications set forth below:

05/229,213	Patented 28 June 1974 (Pat. # 3,820,894)
05/339,817	Patented 05 July 1977 (Pat. # 4,034,276)
05/366,714	Patented 12 October 1976 (Pat. # 3,986,922)
05/325,941	Patented 29 November 1977 (Pat. # 4,060,848)
05/325,933	Patented 05 April 1977 (Pat. # 4,016,540)
05/288,247	Patented 17 October 1978 (Pat. # 4,121,284)
05/727,330	Abandoned 27 February 1979
05/730,756	Abandoned 19 June 1979
05/801,879	Patented 13 March 1979 (Pat. # 4,144,582)

11. It appears that the earliest priority date for claims 42-43, 116, 118, and 120 of the present application may be derived from S/N 05/550,231, filed 14 February 1975 (Pat. No. 4,209,843), with the exception of the "single integrated circuit chip" limitation in claims 43 and 118, which is accorded a priority date of 14 December 1977. However, Applicant should note that the date of priority for the "single integrated circuit chip" limitation may be affected by the ultimate determination under 35 U.S.C. 112, first paragraph, below.



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12. If Applicant believes that an earlier priority date should be granted to the claims of the present application, then Applicant should particularly point out how the present claims are supported in their entirety by the relevant application.

### *Drawings*

13. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the single read only memory (ROM) coupled to all of the following elements: IC input circuit, IC writing circuit, IC accessing circuit, IC output circuit, and processing circuit (or multiplier and adder) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

14. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: on page 407M, line 20, Applicant refers to reference sign 112R with respect to figure 6A. However, there is no "112R" in figure 6A.

15. Applicant is reminded to provide a proposed drawing correction showing any amendment in red ink, in particular for informalities other than those noted by the Draftsman on form PTO-948. See MPEP 608.02(q). The proposed drawing correction should also include a separate letter to the Office Draftsman. See MPEP 608.02(r). The Examiner can hold in abeyance providing formal drawings until such time as the case is allowed, but a proposed drawing correction in red ink must be presented in response to this office action.

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***Specification***

16. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

17. The status of all related applications listed in this application must be updated with the current status.

It is noted that "S/N 366,714" is listed as having matured into Patent No. 3,986,922, however, this should be --3,986,022--.

"S/N 490,816" is listed as having matured into Patent No. 4,029,853, however this should be --4,209,853--.

The status of the application listed on page 407E should be updated as appropriate.

18. The disclosure is objected to because of the following informalities:

The "Summary of the Invention" should be updated to be commensurate with the invention as is now claimed. See 37 CFR 1.73 and MPEP 608.01(d).

Appropriate correction is required.

***Claim Objections***

19. Claim 5 is objected to because of the following informalities:

As per claim 5, there are two "b)" and "c)" designations in the claim.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

20. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

21. Claims 5, 41, 44, 47, 50-56, 59-60, 62, 64-69, 71-88, 91, 93, and 118 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per claims 5, 41, 44, 47, 50-56, 59-60, 62, 64-69, 71-88, 91, and 93, there does not appear to be antecedent basis in the specification for a single read only memory (ROM) coupled to all of the following elements: IC input circuit, IC writing circuit, IC accessing circuit, IC output circuit, and processing circuit (or multiplier and adder), features of each independent claim listed above. Although several ROMs are discussed in the specification (e.g. figure 6A ["P-Store" 610], figure 6C ["ROM" 641]), there is no description of a single ROM coupled to all of the elements as set forth in the independent claims.

As per claims 5, 41, 44, 47, 50-56, 59-60, 62, 64-69, 71-88, 91, and 93, there does not appear to be support in the specification for "coupling" a ROM to an "input circuit", "writing circuit", "accessing circuit", or an "output circuit".

As per claims 5, 41, 44, 47, 50-56, 59-60, 62, 64-69, 71-88, 91, and 93, there does not appear to be support in the specification for an "input circuit", "writing circuit", "accessing circuit", or an "output circuit".

As per claims 41, 47, 50, 53, 56, 59-60, 62, 64-65, 68-69, 118, the specification does not set forth that the elements are implemented on a "single integrated circuit chip". There is no

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mention of a single integrated circuit chip or a single IC chip in the specification. There is a mention of “monolithic integrated circuits” on page 362, but this is in relation to the monolithic charge coupled devices and not to implementing a RAM, ROM, and digital signal processor on a single integrated circuit chip together.

Please note that claim 5 sets forth “an integrated circuit stored program digital computer”, but this phrase does not convey that the elements of the stored program digital computer are implemented on a single integrated circuit chip. In a similar manner, claims 71, 76-77, 83-87, and 91 set forth an “integrated circuit filter processor”, but this phrase does not convey that the elements of the filter processor are implemented on a single integrated circuit chip.

As per claim 64, 76, and 83-86, there does not appear to be support in the specification for a dynamic random access alterable memory that requires refreshing.

22. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

23. Claims 5, 41, 44, 47, 50-56, 59-60, 62, 64-69, 71-88, 91, and 93 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 5, 41, 44, 47, 50-56, 59-60, 62, 64-69, 71-88, 91, and 93, it is not clear whether the words “coupled” or “coupling” are intended to set forth a direct (i.e. no intervening elements) coupling or indirect coupling. The ambiguity in the use of the term(s) is compounded by the fact that Applicant does not have support in the specification for term(s). The ambiguity is further compounded by the fact that several of the elements which are coupled (e.g. input circuit, writing circuit, accessing circuit, and output circuit) do not have support in the

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specification. Therefore the Examiner cannot reasonably determine how the Applicant intends to “couple” the elements together based on the specification.

***Claim Rejections - 35 USC § 102***

24. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

25. Claims 5, 42, 71-88, 91, 93, 116, and 120 are rejected under 35 U.S.C. 102(b) as being anticipated by Dunn et al. (3,750,024).

As per claims 42, 116, and 120, Dunn et al. teaches, with reference to figures 4A-4B, a system including an all purpose arithmetic unit 25, a read only memory 33, and a random access memory 26 (“alterable memory”). The read only memory 33 stores a program of instructions which will cause the arithmetic unit 25 to perform all required calculations (“storing a digital signal processor program in an integrated circuit read-only memory”). See column 13, lines 9-11. The random access memory 26 is used to store parameters, data samples, and the intermediate and final results of calculations (“storing digital signal processor operands in an integrated circuit”). See column 12, lines 46-48, and column 13, lines 2-8. Speech data samples are entered through a 10 bit analog to digital converter 27 (“entering input information”, where the speech data samples are the input information). See column 12, lines 49-51.

The program stored in the read only memory, the operands in the random access memory (see column 13, lines 14-15), and the input speech samples are used to perform calculations by

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the arithmetic unit 25 as set forth in Table IV in column 13. The purpose of the calculations are to generate filtered information ("generating filtered information in response to the digital signal processor program, in response to the digital signal processor operands, and in response to the input information"). See figures 1 and 2, column 7, lines 36-40, and column 9, lines 16-35. The filtered information is then passed on to parameter coder and 9-bit to 8-bit translator 34 and then on to multiplexer 36 ("generating output information in response to the filtered information"). See column 14, lines 5-17.

Dunn et al. further teaches specific integrated circuit components utilized in implementing the invention. See column 15, lines 60-61.

Claims 5, 71-88, 91, and 93, as best understood given the ambiguities set forth above in the rejection of the claims under 35 U.S.C. 112, are rejected for the reasons set forth for claims 42, 116, and 120.

### ***Claim Rejections - 35 USC § 103***

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

27. Claims 41, 43-47, 50-56, 59-60, 62, 64-69 and 118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunn et al. in view of Boone et al. (4,074,351).

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As per claims 43 and 118, Dunn et al. teaches the invention as set forth for claim 116, above. However, Dunn et al. does not teach that the ROM and alterable memory are implemented on a single integrated circuit chip.

Boone et al. teaches a system with a ROM, RAM, and arithmetic logic unit (ALU) implemented on the same monolithic integrated semiconductor system. See the abstract and figures 2 and 23. It would have been obvious to one of ordinary skill in the art to implement the ROM and alterable memory (along with the arithmetic unit) of Dunn et al. on a single integrated circuit chip, as suggested by Boone et al., because this would reduce cost, reduce the power requirements, save space in the system, and create a more versatile chip for performing different functions.

Claims 41, 44, 47, 50-56, 59-60, 62, and 64-69, as best understood given the ambiguities set forth above in the rejection of the claims under 35 U.S.C. 112, are rejected for the reasons set forth for claims 43 and 118.

### ***Response to Arguments***

28. Applicant's arguments filed 28 March 2002 (paper no. 30) have been fully considered but are considered moot given the significant differences in the rejections now set forth from the rejections previously set forth.

### ***Conclusion***

29. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

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All "OFFICIAL" patent application related correspondence transmitted by FAX must be directed to the central FAX number at **(703) 872-9306**:

"INFORMAL" or "DRAFT" FAX communications may be sent to the Examiner at **(703) 746-5693**, only after approval by the Examiner.

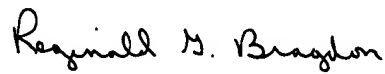
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Fourth Floor (receptionist).

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reginald G. Bragdon whose telephone number is (703) 305-3823. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 4:30 PM and every other Friday from 7:00 AM to 3:30 PM.

The examiner's supervisor, Mano Padmanabhan, can be reached at (703) 306-2903.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

RGB  
February 2, 2004

  
Reginald G. Bragdon  
Primary Patent Examiner  
Art Unit 2188